

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A high-speed router for transmitting data packets, containing header data and useful data, between data networks, the router ~~having~~ comprising:  
a plurality of data processing processors for parallel data processing of the header data;  
a demultiplexer for separating the data packets into header data and useful data; and  
a distribution processor for distributing the separated header data among the data  
processing processors, wherein the distribution processor distributes the header data at least in  
part on the basis of a priority specified by the header data and the workload of the data  
processing processors.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Currently Amended) The high-speed router as claimed in claim 1, wherein the distribution processor is configured to distribute the header data ~~are distributed to~~ among the data  
processing processors by means of DMA operations.

6. (Currently Amended) The high-speed router as claimed in claim 1, ~~wherein~~ further comprising a CAM coprocessor having an associative memory ~~is provided~~ for classifying the data packets.

7. (Currently Amended) The high-speed router as claimed in claim 1, ~~wherein~~ further comprising a useful-data memory ~~is provided~~ for buffer-storing the separated useful data.

8. (Currently Amended) The high-speed router as claimed in claim 1, wherein ~~the~~ header data and useful data ~~in~~ corresponding to a data packet ~~contain~~ each have a respective identifier associated with the corresponding data packet.

9. (Currently Amended) The high-speed router as claimed in claim ~~[[1]]~~ 7, ~~wherein~~ further comprising a first multiplexer ~~is provided~~ for compiling header data and useful data into data packets, the first multiplexer being configured to accept useful data ~~coming~~ from the useful-data memory or from a switching mechanism.

10. (Currently Amended) The high-speed router as claimed in claim ~~[[1]]~~ 9, ~~wherein~~ further comprising a second multiplexer ~~is provided~~ for compiling the useful data buffer-stored in the useful data memory and the header data.

11. (Currently Amended) The high-speed router as claimed in claim ~~[[1]]~~ 9, ~~wherein~~ ~~the first multiplexer has~~ further comprising a FIFO memory connected downstream of ~~it~~ the first multiplexer for outputting the compiled data packets through the router.

12. (Currently Amended) The high-speed router as claimed in claim ~~[[1]]~~ 10, wherein the output of the second multiplexer is connected to the switching mechanism.

13. (Currently Amended) The high-speed router as claimed in claim [[1]] 6, wherein the distribution processor, the data processing processors and the CAM coprocessor are connected to a common header data bus.

14. (Currently Amended) The high-speed router as claimed in claim 1, wherein each data processing processor is connected to a respective dedicated local memory.

15. (Currently Amended) The high-speed router as claimed in claim [[1]] 13, ~~wherein~~ further comprising a common memory ~~is additionally~~ connected to the header data bus.

16. (Currently Amended) The high-speed router as claimed in claim [[1]] 13, wherein the CAM coprocessor is connected to the header data bus via FIFO buffer memories.

17. (Currently Amended) The high-speed router as claimed in claim 1, ~~wherein the demultiplexer has~~ further comprising an input buffer connected upstream of ~~the demultiplexer~~.

18. (Currently Amended) The high-speed router as claimed in claim 1, ~~wherein the data networks are~~ configured to transmit data packets between a first data network and a second data network, the first data network comprising a LAN network[[s]].

19. (Currently Amended) The high-speed router as claimed in claim 1, ~~wherein one of the data networks is~~ configured to transmit data packets between a first data network and a second data network, the second data network comprising the Internet.

20. (Previously Presented) The high-speed router as claimed in claim 1, wherein the distribution processor and the data processing processors are processors of the same processor type.